

Practitioner's Docket No. END920030160US1**PATENT****IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of: John Fred Davis et al.

Application No.: 10 / 796,161

Group No.: 4121

Filed: 03/09/2004

Examiner: Matthew E. Kessler

For: SYSTEM, METHOD AND COMPUTER PROGRAM TO BLOCK SPAM

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION OF PRIOR INVENTION IN THE UNITED STATES  
OR IN A NAFTA OR WTO MEMBER COUNTRY  
TO OVERCOME CITED PATENT OR PUBLICATION (37 C.F.R. § 1.131)**

NOTE: 37 C.F.R. § 1.131 Affidavit or declaration of prior invention.

(a) When any claim of an application or a patent under reexamination is rejected, the inventor of the subject matter of the rejected claim, the owner of the patent under reexamination, or the party qualified under §§ 1.42, 1.43, or 1.47, may submit an appropriate oath or declaration to establish invention of the subject matter of the rejected claim prior to the effective date of the reference or activity on which the rejection is based. The effective date of a U.S. patent, U.S. patent application publication, or international application publication under PCT Article 21(2) is the earlier of its publication date or date that it is effective as a reference under 35 U.S.C. 102(e). Prior invention may not be established under this section in any country other than the United States, a NAFTA country, or a WTO member country. Prior invention may not be established under this section before December 8, 1993, in a NAFTA country other than the United States, or before January 1, 1996, in a WTO member country other than a NAFTA country. Prior invention may not be established under this section if either:

**CERTIFICATION UNDER 37 C.F.R. §§ 1.8(a) and 1.10\***

(When using Express Mail, the Express Mail label number is mandatory;  
Express Mail certification is optional.)

I hereby certify that, on the date shown below, this correspondence is being:

**MAILING**

- ☐ deposited with the United States Postal Service in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

**37 C.F.R. § 1.8(a)****37 C.F.R. § 1.10 \***

- ☐ with sufficient postage as first class mail. ☐ as "Express Mail Post Office to Addressee"  
Mailing Label No. \_\_\_\_\_ (mandatory)

**TRANSMISSION**

- ☐ facsimile transmitted to the Patent and Trademark Office, (571) 273-8300.

X E-filed

Date: 02/27/2008

Signature

Jennifer Smith

(type or print name of person certifying)

\* Only the date of filing (§ 1.6) will be the date used in a patent term adjustment calculation, although the date on any certificate of mailing or transmission under § 1.8 continues to be taken into account in determining timeliness. See § 1.703(f). Consider "Express Mail Post Office to Addressee" (§ 1.10) or facsimile transmission (§ 1.6(d)) for the reply to be accorded the earliest possible filing date for patent term adjustment calculations.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome  
Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 1 of 5)

(1) The rejection is based upon a U.S. patent or U.S. patent application publication of a pending or patented application to another or others which claims the same patentable invention as defined in § 1.601(n); or

(2) The rejection is based upon a statutory bar.

## PURPOSE OF DECLARATION

1. This declaration is to establish completion of the invention of this application in

- ☒ the United States  
☐ the NAFTA country \_\_\_\_\_ (name of country)  
☐ the WIPO country \_\_\_\_\_ (name of country)

at a date prior to March 08, 2004, that is the effective date of the prior art

- ☐ publication \_\_\_\_\_  
☐ patent \_\_\_\_\_  
☒ patent publication 2005/198159  
☐ other \_\_\_\_\_

that was cited by the

- ☒ examiner.  
☐ applicant.

NOTE: 37 C.F.R. § 1.131 is not applicable to a rejection based on a U.S. patent that CLAIMS the rejected invention.

2. The person making this declaration is (are):

- ☐ the inventor(s).  
☐ only some of the joint inventor(s) (and a suitable excuse is attached for failure of the omitted joint inventor(s) to sign)  
☒ the party in interest (and a suitable explanation as why it is not possible to produce the declaration of the inventor(s) is attached) - The documents (Invention Disclosure and email) speak for themselves.

## FACTS AND DOCUMENTARY EVIDENCE

NOTE: "The showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference, or conception of the invention prior to the effective date of the reference coupled with due diligence from prior to said date to a subsequent reduction to practice or to the filing of the application. Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence satisfactorily explained." 37 C.F.R. § 1.131(b).

See Rule 131 Affidavit

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 2 of 5)

3. To establish the date of completion of the invention of this application, the following attached documents and/or models are submitted as evidence:

(check all applicable items below)

- ☐ sketches
- ☐ blueprints
- ☐ photographs
- ☐ reproduction(s) of notebook entries
- ☐ model
- ☐ supporting statement(s) by witness(es) (where verbal disclosures are the evidence relied upon)
- ☐ interference testimony
- ☒ disclosure documents and email from Clark Jeffries dated December 08, 2003

**NOTE:** While conception is the mental part of the inventive act, it must be capable of proof, such as by demonstrative evidence or by a complete disclosure to another. Conception is more than a vague idea of how to solve a problem. The requisite means themselves and their interaction must also be comprehended. See *Mergenthaler v. Scudder* 1897 C.D. 724, 81 O.G. 1417." See also M.P.E.P. § 715.07 and § 2138.04, 7th ed.

4. From these documents and/or models, it can be seen that the invention in this application was made

- ☐ on \_\_\_\_\_
- ☒ at least by the date of 12/08/2003, which is a date earlier than the effective date of the reference.

**NOTE:** "If the dates of the exhibits have been removed or blocked off, the matter of dates can be taken care of in the body of the oath or declaration." M.P.E.P. § 715.07, 8th ed.

**NOTE:** "[T]he dates in the oath or declaration may be the actual dates, or, if the applicant or patent owner does not desire to disclose his or her actual dates, he or she may merely allege that the acts referred to occurred prior to a specified date. However, the actual dates of acts relied on to establish diligence must be provided." M.P.E.P. § 715.07, 8th ed.

### DILIGENCE

**NOTE:** "Where there has not been reduction to practice prior to the date of the reference, the applicant or patent owner must also show diligence in the completion of his or her invention from a time just prior to the date of the reference continuously up to the date of the actual reduction to practice or up to the date of filing his or her application (filing constitutes a constructive reduction to practice, § 1.131)." M.P.E.P. § 715.07, 8th ed..

**NOTE:** "A conception of an invention, though evidenced by disclosure, drawings, and even a model, is not a complete invention under the patent laws, and confers no rights on an inventor, and has no effect on a subsequently granted patent to another, UNLESS HE OR SHE FOLLOWS IT WITH REASONABLE DILIGENCE BY SOME OTHER ACT, such as an actual reduction to practice or filing an application for a patent. *Automatic Weighing Mach. Co. v. Pneumatic Scale Corp., Limited* 1909 C.D. 498, 139 O.G. 991, M.P.E.P. § 715.07, 8th ed.

"Conception in the mental part of the inventive act, but it must be capable of proof, as by drawings, complete disclosure to another person, etc. In *Mergenthaler v. Scudder*, 1897 C.D. 724, 81 O.G. 1417, it was established that conception is more than a mere vague idea of how to solve a problem; the means themselves and their interaction must be comprehended also." M.P.E.P. § 715.07, 8th ed.

**NOTE:** "[O]nly diligence before reduction to practice is a material consideration. The 'lapse of time between the completion or reduction to practice of an invention and the filing of an application thereon' is not relevant to an affidavit or declaration under 37 CFR 1.131. See *Ex parte Merz*, 75 USPQ 296 (Bd. App. 1947)." MPEP § 715.07(a), 8th ed.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 3 of 5)

5. Attached is a statement establishing the diligence of the applicants, from the time of their conception, to a time just prior to the date of the reference, up to the:

- ☐ actual reduction to practice.
- ☒ filing of this application.

### TIME OF PRESENTATION OF THE DECLARATION

*(complete (a), (b) or (c))*

- (a) ☒ This declaration is submitted prior to final rejection.
- (b) ☐ This declaration is submitted with the first response after final rejection, and is for the purpose of overcoming a new ground of rejection or requirement made in the final rejection.
- (c) ☐ This declaration is submitted after final rejection. A showing under 37 C.F.R. § 1.116(b) is submitted herewith.

### DECLARATION

6. As a person signing below:

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 4 of 5)

**SIGNATURE(S)**

7. (complete A or B below)

**A. Inventor(s)**

Full name of sole or first inventor \_\_\_\_\_

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_ Country of Citizenship \_\_\_\_\_

Residence \_\_\_\_\_

Post Office Address \_\_\_\_\_

Full name of second joint inventor, if any \_\_\_\_\_

Inventor's signature \_\_\_\_\_

Date \_\_\_\_\_ Country of Citizenship \_\_\_\_\_

Residence \_\_\_\_\_

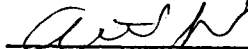
Post Office Address \_\_\_\_\_

(use added page for signature by additional inventors)

Number of pages added: 14**B. Assignee**

Arthur J. Samodovitz, REG No. 31, 297

(type or print name of person signing)



Signature

Feb 27, 2008

Date

IBM Corporation, SHCB/040-3

P.O. Address

1701 North Street, Endicott, NY 13760

International Business Machines Corporation

(type name of assignee)

New Orchard Road, Armonk, NY 10504

Address of assignee

IP Counsel

Title of person authorized to sign  
on behalf of assigneeAssignment recorded in PTO on 04/16/04Reel 014525 Frame 0642

A "CERTIFICATE UNDER 37 C.F.R. § 3.73(b)" is attached.

(Declaration of Prior Invention in the United States or in a NAFTA or WTO Member Country to Overcome  
Cited Patent or Publication—37 C.F.R. § 1.131 [9-32]—page 5 of 5)

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

**STATEMENT UNDER 37 CFR 3.73(b)**Applicant/Patent Owner: John Fred Davis et al.Application No./Patent No.: 10/796,161 Filed/Issue Date: 03/09/2004Entitled: SYSTEM, METHOD AND COMPUTER PROGRAM TO BLOCK SPAMInternational Business Machines Corporation, a Corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. ☒ the assignee of the entire right, title, and interest; or
2. ☐ an assignee of less than the entire right, title and interest  
(The extent (by percentage) of its ownership interest is \_\_\_\_\_ %)

in the patent application/patent identified above by virtue of either:

- A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel 014525, Frame 0642, or for which a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet.☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Arthur J. Samodovitz  
SignatureFeb 27, 2008  
DateArthur J. Samodovitz  
Printed or Typed Name607-429-4368  
Telephone NumberIP Counsel  
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application:	:	Group Art Unit: 4121
John Fred Davis et al.	:	Examiner: Matthew E. Kessler
Serial No.: 10/796,161	:	IBM Corporation
Filed: 03/09/2004	:	Intellectual Property Law
Title: SYSTEM, METHOD AND COMPUTER	:	Department SHCB/040-3
PROGRAM TO BLOCK SPAM	:	1701 North Street
Confirmation No. 3025	:	Endicott, NY 13760

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

Rule 131 Affidavit

1. A true copy of the Invention Disclosure dated September 27, 2003 entitled "Efficient Blocking of Spam Sources" is enclosed.
2. A true copy of the an email from inventor, Clark Jeffries dated December 08, 2003 is enclosed.
3. The present patent application 10/796,161 by John Fred Davis, et al. was filed on March 9, 2004.
4. US 2005/198159 by Kirsch was filed on March 8, 2004.
5. The present patent application names four inventors who signed the Declaration on the following dates:  
  
John Fred Davis: March 3, 2004.  
Kevin David Himberg: March 1, 2004  
Clark Debs Jeffries: March 1, 2004  
Garreth Joseph Jeremiah: March 5, 2004.
6. March 5, 2004 was a Friday.
7. March 5, 2004, the date of last execution of the Declaration, preceded the filing date of Kirsch.
8. March 9, 2004 was a Tuesday.

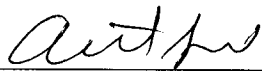
Only two business days elapsed from the execution of the Declaration by Garreth Joseph Jeremiah on Friday March 5, 2004 until the filing of the patent application on Tuesday March 9, 2004.

9. A true copy of the Declaration is attached.

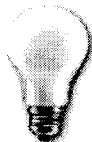
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001, of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Respectfully submitted,

Dated: Feb 27, 2008  
Phone: 607-429-4368  
Fax: 607-429-4119

  
Arthur J. Samodovitz  
Reg. No. 31, 297





## Disclosure END8-2003-0193

Prepared for and/or by an IBM Attorney - IBM Confidential

Created By Clark D Jeffries On 09/27/2003 05:24:39 AM ZE9

Last Modified By Clark D Jeffries On 09/30/2003 11:15:41 AM EDT

Required fields are marked with the asterisk (\*) and must be filled in to complete the form .

### \*Title of disclosure (in English)

Efficient blocking of spam sources

### Summary

Status	Under Evaluation
Final Deadline	
Final Deadline Reason	
*Processing Location	Endicott
*Functional Area	select (Larry Longseth) GS-(LONGSETH) BOULDER Global Services
Attorney/Patent Professional	Arthur Samodovitz/Endicott/IBM
IDT Team	select Gerri Peper/Boulder/IBM Patrick Wong/San Jose/IBM Donald Schaefer/Boulder/IBM Fred Ris/Boulder/IBM Glenn Haggard/Phoenix/IBM Fred Ris/Boulder/IBM
Submitted Date	09/27/2003 05:43:38 AM ZE9
*Owning Division	select GS
*Line of Business	SO - Strategic Outsourcing Primary Inventor's Line of Business (LoB)
*Industry/Sector	Finance - Banking
*Competency	Technical Support
Incentive Program	
Lab	LONGSETH
*Technology Code	740
PVT Score	

### Inventors with a Blue Pages entry

Inventors: John F Davis/Raleigh/IBM@ibmus, KEVIN HIMBERGER/Raleigh/IBM@IBMUS, Clark D Jeffries/Raleigh/IBM, Garreth Jeremiah/Markham/IBM@IBMCA

Inventor Name	Inventor Serial	Div/Dept	Inventor Phone	Manager Name
Davis, John F.	7A1688	29/YM5A	441-7985	Booker, Alan J.
HIMBERGER, KEVIN D.	738588	07/N48B	441-5361	Lott, Jessica L.
> Jeffries, Clark D.	537014	07/N48B	441-1429	Lott, Jessica L.
Jeremiah, Garreth (G.J.)	004235	FN/G9U	N/A	Wagner, Glenn (G.J.)

> denotes primary contact

### Inventors without a Blue Pages entry

## IDT Selection

Attorney/Patent Professional  
IDT Team

Arthur Samodovitz/Endicott/IBM  
Gerri Peper/Boulder/IBM  
Patrick Wong/San Jose/IBM  
Donald Schaefer/Boulder/IBM  
Fred Ris/Boulder/IBM  
Glenn Haggard/Phoenix/IBM  
Fred Ris/Boulder/IBM

Response Due to IP&L 10/30/2003

### \*Main Idea

1. Background: What is the problem solved by your invention? Describe known solutions to this problem (if any). What are the drawbacks of such known solutions, or why is an additional solution required? Cite any relevant technical documents or references.

Current spammers sometimes own blocks of IP address space. For example, one spam company known to the inventors has about 16 different blocks of address space. Each block may be defined by a /24 prefix, so it includes 256 distinct addresses.

During a spam event, the receivers may detect spam and start to block the Source Address (SA) of the spam. The spammer only need shift the SA to another of the 256 values to escape simple filtering on the exact SA value.

2. Summary of Invention: Briefly describe the core idea of your invention (saving the details for questions #3 below). Describe the advantage(s) of using your invention instead of the known solutions described above.

The invention include blocking a range of addresses. For example, if the spammer owns all addresses of the form 10.20.30.\*, defined in this example by 24 fixed bits and 8 arbitrary bits, then there are actually 256 possible source addresses. All the source addresses could be blocked one by one, but that would imply 256 distinct filter rules. Firewall manufacturers typically caution administrators against using many filter rules, for example 500, due to the performance impact.

The present invention includes, to continue the example, not blocking 256 distinct addresses, but blocking all 256 with one range filter rule.

3. Description: Describe how your invention works, and how it could be implemented, using text, diagrams and flow charts as appropriate.

The present invention includes adding a range filter rule to the firewall to block spam if several values within the range have been observed to be spam sources and if background research shows that one administration (one autonomous system) has been assigned the block of address values.

The benefit of the invention is efficient blocking of sources of mass email distributions or spam.

### \*Patent Value Tool

\* 1. Select the single most appropriate technology category for your invention from the following technologies list.

(740) Tech Tag 700 Network Computing-740 Network Management - Path Finding - Traffic Control - Measurement Network Security; Network Interface Control; Node management message authentication; Network Architecture; Network Access; Network Transport; Network Switching; Packet Switching  
Comments

Are there any additional significant markets where the invention is likely to have impact?

☐ Yes ☒ No

\*2. Have you implemented the invention (e.g., made a prototype) or otherwise shown that it is workable?

☒ Yes ☐ No

\*3. Has the subject matter of the invention or a product incorporating the invention been offered for sale, or is it likely to be offered for sale, as part of an IBM product or service?

No known product plans within 2 years

☒ Maybe; GA 1-2 years away

Yes; GA within 3-12 months

Yes; GA within 3 months

Yes; product has been announced

What product?

Possibly included in some future version of Billy Goat.

What is the significance of the invention within the product?

Improves general usability

Enables a minor feature

☒ Enables a major feature

What feature?

Efficient blocking of spam

\*4. Has the invention been commercially used (internally or externally) by IBM or another entity (e.g., included in or used to make products, or prototypes provided to a customer)?

Yes ☒ No

\*5. In what type of product might a competitor include the invention?

firewall or router capable of filtering

What competitor(s) (indicate home country of such competitors if not United States)?

All devices that filter spam at a firewall.

\*6. How easily can the use of the invention by a third party be detected?

Undiscoverable; third party must admit use for IBM to know

Difficult; e.g.; with reverse engineering or examination of available code

With work; e.g.; using test cases; but not reverse engineering

☒ Easily; by running & viewing product operation

Trivially; without purchase of product; e.g.; by reading product literature

Please propose how a test would be performed and what test methods may be required:

Attempt to pass traffic with spam behavior and a Source Address range of values defined by a prefix such as 10.20.30.\* through a firewall in a lab.

\*7. Is the invention applicable to a standard?

Yes ☒ No

\*8. Have you, or any of the other inventors, submitted this invention disclosure or a similar invention disclosure previously?

☒ Yes ☐ No

Please provide the disclosure number: END 8 2003 0163

\*\*9. Please list the invention disclosures (previously submitted or about to be submitted), products, patents, or publications that you and the other inventors feel are the most relevant to your invention (e.g., pertaining to the problem you are solving, including other solutions to the problem), be they from you or anyone else, or if not applicable, enter "None":

END 8 2003 0163

\* 10. Was the invention made in the course of any activity that involved any other party, be it

- The government

- A customer (such as an RFQ)
- A development partner
- An alliance
- Any contract activity
- As part of a standards setting activity
- Other persons not employed by IBM

Yes ☐ No

\*11. Have you ever disclosed your invention to anyone outside IBM, or do you plan to do so in the future?  
Yes ☐ No

\*12. If the invention relates to a product or service that is outside the scope of your business unit, please recommend IBM business unit(s), IBM location(s) or individual(s) within IBM that you think would provide a competent evaluation of your invention:

## \*PVT II

**All of the questions below are required and must be answered in order to calculate a PVT Score**

### A.Threshold Questions

\*1. **Operability** - Is there an identifiable operable embodiment of the invention (i.e., an embodiment that has been demonstrated or that would be reasonably expected to provide the benefits of the invention)?  
Yes ☐ No

Reasons for above answer:

\*2. **Novelty**- Are one or more concept(s) of the invention novel over what is already known in the literature, existing commercial products, patents, and earlier IBM invention disclosures?  
Yes ☐ No

Reasons for above answer:

### B.Valuation Questions

\*1. Adequacy of Description:  
☐ Inadequate; invention unclear from description  
☐ Incomplete; essential features missing  
☐ Further clarification or implementation detail needed  
☐ Clear and complete as is

State reason for answer:

\*2. Technical contribution of invention:  
☐ None  
☐ Minor addition to known technology  
☐ Significant addition to known technology  
☐ Major advance in technology

Reasons for above answer:

\*3. Describe the problem solved/benefit provided and the implementation cost of the invention compared to existing or reasonably expected alternatives:  
☐ Minor problem/incremental benefit - significant implementation cost  
☐ Significant problem; substantial benefit - significant implementation cost  
☐ Minor problem/incremental benefit - minor implementation cost  
☐ Significant problem/substantial benefit - minor implementation cost

\*4. Are any alternatives to the invention available to those wishing to avoid its use?

- ☐ Suitable alternatives available
  - ☐ Alternatives have drawbacks
  - ☐ No feasible alternatives
- Reasons for above answer:

**\*5. Describe the likelihood of use of the invention (answer each):**

IBM's customers?	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Possible	<input type="checkbox"/> Probable	<input type="checkbox"/> Definite
IBM's suppliers/vendors?	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Possible	<input type="checkbox"/> Probable	<input type="checkbox"/> Definite
IBM's competitors?	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Possible	<input type="checkbox"/> Probable	<input type="checkbox"/> Definite
IBM?	<input type="checkbox"/> Unlikely	<input type="checkbox"/> Possible	<input type="checkbox"/> Probable	<input type="checkbox"/> Definite

Reasons for above answer:

**\*6. What % of third party products in the technical field will likely contain the invention?**

- ☐ < 25%
- ☐ 25-50%
- ☐ 50-75%
- ☐ > 75%

Reasons for above answer:

**\*7. How long is the invention likely to be used in products by IBM or others?**

- ☐ < 5 years
- ☐ 5-10 years
- ☐ 10-15 years
- ☐ > 15 years

Reasons for above answer:

**\*8. How easily can use of the invention by a third party be detected?**

- ☐ Undiscoverable; third party must admit use for IBM to know
- ☐ Difficult; e.g.; with reverse engineering or examination of available code
- ☐ With work; e.g.; using test cases; but not reverse engineering
- ☐ Easily; by running & viewing product operation
- ☐ Trivially; without purchase of product; e.g.; by reading product literature

Reasons for the above answer, including description of how use could be detected:

**Post Disclosure Text & Drawings**

To add additional information related to this disclosure once it has been submitted, click the action button below and a new document will be opened for you to enter the new information. To view existing post disclosure information, double-click on the item in the list below (if there has been additional information entered), and the document will open for you to view.

**Date entered    Post disclosure information (comments and drawings)**

From: Clark D Jeffries on 12/08/2003 01:59 PM  
To: Arthur Samodovitz/Endicott/IBM@IBMUS  
cc: John F Davis/Raleigh/IBM@ibmus, KEVIN HIMBERGER/Raleigh/IBM@IBMUS, Garreth Jeremiah/Markham/IBM@IBMCA  
From: Clark D Jeffries/Raleigh/IBM@IBMUS  
Subject: \*IBM Confidential: suggested figures for RSW8 2003 0193

Arthur,

Following our conversation Fri 5 Dec, I suggest the following figures and captions for RSW8 2003 0193. The figures and captions pertain to efficient blocking of some kinds of spam sources by ranges of Source Addresses. They are very similar to the figures and captions for RSW8 2003 0192 (filter rules that are rate limits as opposed to absolute blocks). However, there are a few changes in Fig 1, Fig 2, and in their captions.

Clark

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Figure 1 100 depicts the arrival of inbound traffic 102 at a firewall or router 110 capable of classifying packets according to some or all bits in the Internet Protocol (IP) Source Address (SA) and dropping some packets within a given range of SA values. Traffic that is not dropped (initially all traffic) passes 104 to a server 112 supporting a Message Transfer Agent and other mail services. A spam detection mechanism in the server may learn that a particular SA is likely or certainly a source of spam and pass 120 that information to a Range finder 130. The mail server may delete some email that is likely or certainly spam. Remaining email is passed 106 to the in-box of a User 114. The User 114 may by additional mechanisms conclude that additional SA values are also likely or certainly spam sources and report that information 122 to the Range finder 130. The Range finder 130 digests information and creates or deletes (times out) filter rules the enforcement of which cause dropping packets with an SA in a range deduced by the Range finder. The Range finder 130 may declare filter rules using the Internet Assigned Numbers Authority (IANA) or some other mechanism that suggests ranges of SA values are about as likely as the found SA value to be spam sources. The filter rules are actually enforced in the firewall or router 110. The results of algorithms running in 130 are passed 140 to a Monitor computer 132. The Monitor digests information to create for each rule a time to add the rule to the Action Database 134, a life period for the rule, and a time to delete the rule. This information is passed 142 to an Actions Database (DB) 134. The Actions DB 134 records and transmits 144 add or delete instructions for rules to the firewall or router 110.

Figure 2 200 depicts a flowchart for the present invention. The system starts 202 and simultaneously listens for either MTA spam detection 204 or User declared spam detection 206. If either is detected, the system goes to 208 at which state the Source Address (SA) of the spam traffic is extracted. After consideration of IANA or other information, this leads 210 to creation of a range of SA values to block. A range rule is created 212 to send to the add to the filter rules. This creation takes place in the Range finder 130 of Figure 1. The Range finder passes the ranges to the Monitor 132 of Figure 1. The Monitor first creates a start time and initial period 220 for enforcement of a rate limit. The rate limit is transmitted to the firewall or router 110 of Figure 1. Then the system observes current time 222 and compares current time to the initial time plus the initial period for each rate limit rule. The rule is continuously enforced 224 so long as current time is smaller than start time plus period. That is, the rule appears in the Actions Database 134 of Figure 1 and is enforced by the firewall or router 110 of Figure 1. Otherwise the enforcement stops 226 and the system retests for persistence of spam behavior of the SA 228. If spam behavior continues 230 then the start time and period of the rate limit rule for the SA are refreshed 232. That refreshed information is passed to the time comparator 222. If spam behavior does not continue 230, then the rule is deleted from the Actions Database 134 of Figure 1 and the firewall or

router 110 of Figure 1.



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Docket No.  
END920030160US1

## Declaration and Power of Attorney For Patent Application

### English Language Declaration

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled  
**SYSTEM, METHOD AND COMPUTER PROGRAM TO BLOCK SPAM**

the specification of which

(check one)

☒ is attached hereto.

☐ was filed on \_\_\_\_\_ as United States Application No. or PCT International Application Number \_\_\_\_\_ and was amended on \_\_\_\_\_

(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, or plant breeder's rights certificate(s), or 365(a) of any PCT International application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>
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_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/>



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I hereby claim the benefit under 35 U.S.C. Section 119(e) of any United States provisional application(s) listed below:

_____	_____
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_____	_____
(Application Serial No.)	(Filing Date)
_____	_____
(Application Serial No.)	(Filing Date)

I hereby claim the benefit under 35 U. S. C. Section 120 of any United States application(s), or Section 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. Section 112. I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, C. F. R., Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application:

_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
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(Application Serial No.)	(Filing Date)	(Status)
		(patented, pending, abandoned)
_____	_____	_____
(Application Serial No.)	(Filing Date)	(Status)
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (list name and registration number)

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